

REMARKS

Claims 1-17 were pending in this application.

Claims 1-5 and 11-16 have been rejected.

Claims 6-10 have been allowed.

Claim 17 has been objected to.

Claim 1 has been amended as shown above.

Claims 18-20 have been added.

Claims 1-20 are now pending in this application.

Reconsideration and full allowance of Claims 1-20 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicants thank the Examiner for the indication that Claims 6-10 are in condition for allowance. These claims have not been amended and therefore remain in condition for allowance.

The Applicants also thank the Examiner for the indication that Claim 17 would be allowable if rewritten in independent form to incorporate the elements of its base claim and any intervening claim. Because the Applicants believe that the remaining claims in this application are allowable, the Applicants have not rewritten Claim 17 in independent form.

II. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1-4 and 11-13 under 35 U.S.C. § 103(a) as being

unpatentable over U.S. Patent No. 6,233,637 to Smyers et al. ("*Smyers*") in view of U.S. Patent No. 5,941,968 to Mergard et al. ("*Mergard*"). The Office Action rejects Claims 5 and 14-16 under 35 U.S.C. § 103(a) as being unpatentable over *Smyers* and *Mergard* in further view of Applicant Admitted Prior Art ("*APA*"). These rejections are respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. (MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (*MPEP* § 2142).

The Office Action acknowledges that *Smyers* fails to recite a "plurality of transfer units" that "facilitate transfers of data" among "interface registers" as recited in Claim 1. (*Office Action, Page 2, Last paragraph*). The Office Action also acknowledges that *Smyers* fails to recite communicating data among "interface registers" using a "plurality of register transfer units" as recited in Claim 11. (*Office Action, Page 3, Last paragraph*). The Office Action then asserts that *Mergard* recites these elements of Claims 1 and 11 and that it would be obvious to modify *Smyers* with *Mergard*. (*Office Action, Page 2, Last paragraph – Page 3, First paragraph; Page 3, Last paragraph*).

Mergard recites a computer system that includes "data steering logic" (element 220). (*Abstract; Figure 2*). The data steering logic is coupled to a CPU (element 202) and to PC Cores/Registers (elements 208). (*Figure 2*). The data steering logic is coupled to the PC Cores/Registers either directly or indirectly through a bus (element 224). (*Figure 2*). Among other things, the data steering logic supports the transfer of data between the CPU and the PC Cores/Registers while data is also being transferred between a graphics controller and a unified system memory. (*Col. 7, Lines 60-64*).

Mergard simply recites that “data steering logic” allows data transfers between a CPU and a set of registers. *Mergard* contains absolutely no mention that the data steering logic allows data transfers between two or more registers. This can be clearly seen in Figure 3 of *Mergard*, which illustrates the various paths that data may take through the data steering logic. As shown in Figure 3 of *Mergard*, there is no data transfer path between two or more registers. Instead, the data steering logic allows data transfers between one of the registers and the CPU. As a result, *Mergard* fails to disclose, teach, or suggest a “plurality of transfer units” that “facilitate transfers of data” among “interface registers” as recited in Claim 1. *Mergard* also fails to disclose, teach, or suggest communicating data among “interface registers” using a “plurality of register transfer units” as recited in Claim 11.

Moreover, even assuming (without admitting) that the data steering logic of *Mergard* allows data transfers between registers, the Office Action fails to provide a valid motivation for modifying *Smyers* with the recitations of *Mergard*. The Office Action asserts that a person skilled in the art would be motivated to modify *Smyers* with *Mergard* because it would “reduce the processing load of [an] instruction processor.” (*Office Action, Page 3, First paragraph; Page 4, First paragraph*). However, the Office Action fails to show that the system of *Smyers* transfers data between registers and therefore needs the data transfer mechanism recited in *Mergard*.

The Office Action relies on either the control registers (element 38), a first register set (element 24), or a second register set (element 28) of *Smyers* as anticipating the “plurality of interface registers” recited in Claims 1 and 11. (*Office Action, Page 2, Last paragraph; Page 3,*

Last paragraph). The various registers in *Smyers* contain information controlling how a data transfer should occur or how data should be processed. (*Col. 4, Lines 47-50; Col. 11, Lines 49-53*).

The Office Action has not shown that a person skilled in the art would incorporate the “data steering logic” of *Mergard* into the system of *Smyers*. In particular, the Office Action fails to identify any portion of *Smyers* indicating that information is actually transferred between different registers in the system of *Smyers*. For example, the Office Action fails to identify any portion of *Smyers* indicating that data is transferred from one of the control registers (element 38) to one of the register sets (elements 24, 28) or that data is transferred from one of the register sets (elements 24, 28) to one of the control registers (element 38). Because the Office Action fails to show that *Smyers* transfers data between registers, the Office Action cannot show that a person skilled in the art would modify *Smyers* to use the “data steering logic” of *Mergard*.

For these reasons, the Office Action fails to establish a *prima facie* case of obviousness against Claims 1 and 11 (and their dependent claims).

Accordingly, the Applicants respectfully request withdrawal of the § 103(a) rejections and full allowance of Claims 1-5 and 11-16.

III. CONCLUSION

For the reasons given above, the Applicants respectfully request reconsideration and allowance of pending claims and that this application be passed to issue.

SUMMARY


If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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